



The Efficiency of the Use of Biostimulants in the Poultry Farming of Uzbekistan

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Abstract: This article provides information about biostimulants, trace elements and other additives used in the growth and development of poultry in farms.

Key words: poultry, microelements, biostimulant, propolis, petroleum growth substance, sodium salicylate, sodium sulfate, acidophilus, anti-stress mixture.

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Poultry farming occupies one of the leading places in providing the human body with protein of animal origin. The share of poultry meat in the total balance of meat products reaches 25-30%, and in the leading countries - 65% or more. About 80-85% of poultry meat is obtained by growing broilers, which currently form the basis of meat poultry farming.

The production of poultry meat is also increasing per capita. It is projected that by 2030 the world will produce more than 125.9 thousand metric tons, an increase of an average of 2.8% over the period 2022-2030. Consumption of poultry meat per capita for the year will be about 24.8 kg.

In this regard, both around the world and in our republic, serious attention is paid to the creation and strengthening of industrial poultry factories.

However, it should be noted that raising poultry is not an easy task. The difficulties arising from this are mainly due to the fact that birds, in comparison with other types of productive animals, have their own characteristics.

Firstly, the bird's body has a high metabolic rate. For example, for the life of 1 kg of body weight, a chicken needs 10 times more oxygen than, say, a cow. And the amount of generated heat, moisture, NH₃, CO₂ and other harmful gases is also ten times greater. All this creates the prerequisites for the violation of the microclimate in the premises.

Secondly, a feature of the bird's body is its excessive susceptibility to so-called stresses, that is, the influence of various environmental factors. These include violations of the temperature and humidity regime, planting density, extraneous noise, interruptions in feeding and watering, etc.

In the same direction, stresses also act during veterinary treatments and breeding and zootechnical selections. The issue of stress during transportation remains a problem for the broiler poultry industry.

The third feature worth paying special attention to is that the bird, despite its very useful qualities, is a direct competitor of humans in the food aspect, since the bird is grown on compound feed, i.e. on the bread that man needs.

Therefore, the task of both practitioners and scientists in the poultry industry is to find opportunities at the lowest cost to achieve greater returns from this industry, knowing the potential of the bird organism.

In solving this problem, an important role is played by the introduction of so-called biostimulants into the practice of poultry farming, which are used as various medicinal and other pharmacologically active substances: antibiotics, vitamins, hormonal preparations, bacterial preparations, special serums, trace elements, phytoncides, sulfur preparations, synthetic growth substances, tranquilizers, antipyretics, bee products, etc.

By mobilizing the hidden reserves of the body within the physiological norm, with the help of such substances, it is possible to protect the bird from diseases, from the above stress factors, increase feed digestibility and productivity, which ultimately reduces the cost of production and increases the profitability of production.

Our studies were carried out in the conditions of the poultry farm "Samarkand parranda", "Ilonsoy parranda", "Marokand parranda", "Navoiy sardoba" and poultry farms on different sex and age groups of birds. At the same time, the influence of such substances as: propolis, PGS sodium salicylate, sodium selenite, sodium sulfate, microelements, acidophilus, anti-stress mixture was tested, the results of which are briefly presented in this paper.

Propolis (beeswax). Laying hens (1000 head) in addition to the diet received a 5% water-alcohol solution of propolis at a dose of 1 ml per head for a month. The egg production of chickens increased by 18.9%, and for each laying hen, 1.35 kg of egg mass was obtained more than in the control. Internal organs developed better, mortality was 0.32% lower, feed savings based on egg products was 15.6%.

PGS (petroleum growth substance). The experiments were carried out on ducklings 15 days old (1000 animals each in the experimental and control groups), which were repeated twice. Ducklings in the experimental groups were added to the basic diet with a 0.1% HPB solution at a dose of 3 ml/kg of live weight for 20 days. As a result, the experiments showed that ducklings under the influence of PGS developed well, their live weight was 8.5% higher compared to the control groups, and the survival rate was 99.7, which is an indicator of good postembryonic viability, the feed savings per unit weight gain was 10.7%.

Sodium salicylate. The experimental and control groups consisted of 8,000 one-day-old chickens each. Sodium salicylate was added to the main diet in doses (mg/kg of feed): from 1 to 20 days - 100, from 20 to 40 days - 200, and from 40 to 70 days - 300.

The summed up results showed that in the group of broilers fed with sodium salicylate, the live weight was higher by 4%, the average daily weight gain - by 10.2%, the feed consumption per unit of weight gain decreased by 11.2%.

With the same drug, an experiment was conducted on laying hens to identify its effect on egg production and incubation quality of eggs. There were 2450 chickens in the control group and 2890 chickens in the experimental group. The drug was fed for a month at a dose of 200 mg/kg of feed.

The total experience revealed that feeding sodium salicylate contributed to an increase in egg production in chickens by 8.71%, livestock safety by 4%, egg weight - 12.62 g, hatchability - 4.9% and feed savings - by 20.5% compared to control groups.

Sodium sulfate. 4677 control and 5670 experimental chickens of 4 days of age were planted for the experiment. The latter to the main diet received sodium sulfate per 1 ton of compound feed 100 g of the drug up to 30 days of age and 200 g from 31 to 65 days of age. In the experimental group, the average delivery weight of each chicken was 1620g, and in the control group it was 1590g, i.e. less than 90g. For each kilogram of weight gain received in the experimental group, 100 g of compound feed was consumed less than in the control group. Due to the increase in average daily weight gain and delivery weight in the experimental group, an additional 557.8 kg of meat was obtained.

Microelements. In the first experiment, laying hens (1000 heads) were fed with a mixture of microelement salts (mg/head): copper sulphate (2.0), iron sulphate (2), cobalt chloride (0.25), and manganese sulphate (0.25) within 3 months. Every 10 days after giving trace elements, a break was made for 5 days. As a result, we received an increase in the weight gain of chickens by 25%, egg production by 20%, a decrease in the incidence and mortality of chickens by 9% compared with the control.

In the second experiment, we studied the effect of pre-incubation treatment of eggs with trace element salt solutions on the hatchability and post-embryonic survival of chickens. A batch of eggs (156 pieces each) before incubation for an hour was kept in solutions of zinc sulfate (1%), sodium selenite (1%), potassium iodide (1%), with parallel control. At the same time, a positive effect of microelements on the studied indicators was established, but in a comparative aspect they are in the following decreasing degree: hatchability - Mn, J, Zn, Se; weight gain - Mn, Zn, J, Se, survival - Mn, Se, Zn, J. On the basis of which it is recommended to use pre-incubation treatment of eggs with a solution of potassium permanganate.

Acidophilus. In the three experimental groups, 5900 chickens were planted, and in the control groups - 5440. Subject to all other conditions, the chickens in the experimental groups were fed with a dry acidophilus preparation at the rate of 1% from the 20th to the 30th, from the 55th to the 65th day, and from 40 to 55 days biovit - 80 at a dose of 15 mg per head. By the end of observations, 4604 broilers with an average delivery weight of 1441 g were saved in the experimental groups, and 3140 broilers with an average delivery weight of 1193 g in the control groups, i.e. by the day of delivery, each broiler in the experimental group weighed 248.3 g more.

An **anti-stress mixture** consisting of: glucose 100 mg/kg, sodium salicylate 100 mg/kg, sodium chloride 100 mg/kg, ascorbic acid 50 mg/kg and sodium selenite 0.15 mg/kg live weight was tested on 400 broiler chickens, mixing to feed for 30 days. It was noted that starting from the 10th day of feeding the mixture, the growth rate of chickens in the experimental group was noticeably ahead of the

chickens from the control group (400 chickens). By the end of the observations, they were 20% higher, and the live weight of each chicken was 80 g more.

Sodium selenite. In three series of experiments, 4204 experimental and 3834 control chickens were used - broilers at 10 days of age. The content is outdoor, the type of feeding is dry. The diet in the first month consisted of compound feed PC - 5.4, the second month PC - 6.4. In addition, the diet was enriched with vitamins A, E, D, B1, B2. Chickens in the experimental groups were added sodium selenite at the rate of 0.2 g per 1 ton of feed. Every 10 days of feeding the drug, a break was made for 10 days.

In total, the chickens received sodium selenite for 30 days. They were handed over for slaughter at the age of 43 days, i.e. 10 days after the end of feeding the drug. The data obtained showed that sodium selenite contributed to an increase in the weight of broilers by 14-20.3%. The average daily weight gain was higher compared to the control by 25.7-36.5%, the safety was on average 3%, the feed payment was 9.7-23.4%. As a result of the use of the drug, additional meat in live weight was obtained.

Conclusion. It has been established that the use of biostimulants in broiler farming increases the safety of poultry and meat products. As a result, the economic effect of the poultry industry in the republic increases.

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